

## AN ETHNOFLORA OF CHOKOLOSKEE ISLAND, COLLIER COUNTY, FLORIDA

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CHOKOLOSKEE ISLAND, one of the largest of Florida's Ten Thousand Island group in Collier County, has a long history of habitation by man. Because of this extended occupation, its flora has shifted in species composition with each change of people. The native flora was mostly tropical hardwood hammock and mangroves; settlement by the Calusa Indians, the Spanish, the Seminoles, the English, and various groups from the United States has greatly altered the original plant associations. At present the island is experiencing what may prove to be the most traumatic shift. The newest change, increasing development, threatens to eliminate all traces of past eras. This study records what remains of the past, as well as present changes.

### HISTORY

Primeval Chokoloskee differed from other islands in the area in being higher and protected in an isolated end of the back bay, now known as the Chokoloskee Bay. Here at the mouth of the Turner River, people from the north first settled about 2200 B.C. (Sears, 1956). The earliest recorded name for the descendants of these people, the Calusa, comes from the Spanish.

The proto-Calusa economy was fishing, hunting, and gathering, and was based on the locally abundant oyster (Cushing, 1896; Willey, 1949; Sears, 1956). Quahog clam, horse conch, and the lightning whelk were other important marine products. These were valued not only for their flesh, but also for their shells which were used for tools since suitable rocks were absent except as occasional trade items from the north. Terrestrial food in the form of deer, opossum, raccoon, and rabbits was also available. Perhaps the most important were birds, particularly turkeys and white ibis, and plant products. These filled the need for a good source of thiamin to counteract the problem of thiaminase. Thiamin (vitamin B<sub>1</sub>) becomes a critical limiting factor in a diet consisting largely of raw shellfish since uncooked fish or shellfish is very high in this particular enzyme (Greig & Gnaedinger, 1971; Bethke *et al.*, 1973). The archeological record (Hrdlicka, 1922) and historical accounts (Barrientos, 1965; Solis de Meras, 1964) demonstrate that these Indians had no gross dietary inadequacies.

To supplement their animal diet, there was an ample vegetable larder. As a starch staple, the Calusa had both red coontie (*Smilax* spp.) and white coontie (*Zamia* sp.). Some zamia was gathered on the west coast, but the bulk was tribute from the subservient tribes of the east coast, where the plant was much more plentiful (Fontaneda, 1944).

The Calusa, and probably their predecessors, subjugated the Indians of the eastern Florida coast and extracted tribute from them (Swanton, 1922). Calusas thwarted all Spanish attempts to Christianize them and to enslave them for work in the gold mines of Hispaniola. This was in contrast to the Lucayans of the Bahamas, and a great proportion of the Matacumbe, Tequesta, and Jaega of southern Florida. Juan Ponce de León, a veteran of genocidal campaigns on both Puerto Rico and Santo Domingo, was repulsed and later died as a testament to Calusa ferocity.

European diseases and slaving drastically reduced the total aboriginal population of Florida. Spanish slave-hunting from the south declined by the early 1600's. In the mid-1600's English and Creek slave raids started, but this time the primary pressure was on the tribes of northern and central Florida. These factors caused the Calusa to shrink from a once-powerful tribe to a small group sequestered in the recesses of the lower western coast. From the early seventeenth century on, there is little or no record regarding the Calusa as a people or a culture.

The next group to inhabit this region, and without a doubt Chokoloskee itself, was a mixture of Cuban fishermen and Indians. The Indians were the so-called "Spanish Indians" who have been the subject of much investigation (Dodd, 1947; Goggin, 1950; Sturtevant, 1953; Neill, 1955). The most probable explanation of the Spanish Indians is that they were Calusa remnants; other accounts attempt to involve vanguard Seminoles and even Choctaws. The Indian-Cuban relationship was a peaceful, commercial arrangement advantageous to both.

There were numerous fishing "ranchos" located along the west coast from Tampa Bay southward, with a peak population of around 400 (Hammond, 1973). The first English language report concerning the "ranchos" was from Roberts (1976). Bernard Romans, surveyor for the British Crown, observed a commerce in 1769 of over 100 tons per year in dried and salted fish and corncob-smoked fish roe with the Havana market (Romans, 1962). Turtles, shark liver oil, songbirds, and "manufactured goods" were also important export items. Cardinals, which brought six to ten dollars each, were caught with a bird lime made from gum elemi, an extract of the gumbo limbo tree (*Bursera simaruba*) (Williams, 1962; Covington, 1959). Transported live to Havana in willow cages, these birds were especially favored among cigar makers, seamen, and the wealthier classes. Manufactured goods probably included surplus cordage termed "cuba." This cord was made by women from one of the various native or introduced plants, e.g., *Yucca aloifolia*, *Agave decipiens*, *Sansevieria metallica*, *Gossypium hirsutum*, *Hibiscus tiliaceus*.

Since this system of fishing "ranchos" was thriving at the beginning of the English administration of Florida (1763-1783), it had been an ongoing concern for quite some time, probably active to some degree by the late 1600's. The largest of these "ranchos" comprised eighteen or twenty palm-thatched huts with a population of fifty to sixty people including women and children (Williams, 1962). About half of the male population was Indian. The Cuban men often took Indian wives, but there was at

least one case in which a Spanish woman became the wife of a Spanish Indian warrior (Sprague, 1964). This Indian later participated in the raid on Indian Key in which Dr. Henry Perrine was killed in 1840. Perrine was at one time Consul to Yucatan and was particularly interested in the introduction of tropical crop plants into the United States (Robinson, 1942).

In typical Spanish tradition (cf. Kimber, 1973), these "ranchos" had small kitchen gardens in which corn, melons, several types of beans, limes, coconuts, and various kinds of aromatic herbs were grown. However, these dooryard gardens did not supply the bulk of their vegetables. The majority came from dealings with the many "plantations" in the area (Williams, 1962). In addition, coontie was obtained farther inland from less acculturated Indians.

These plantations were rarely over seven to eight acres and were located on the higher keys and on old kitchen middens and mounds along the rivers. Middens have since been favorite agricultural sites owing to the rich, black humus left when the tropical hardwood hammock is cleared. Elevation of the middens above sea level (8 to 20 feet) and their ease of access were added advantages. Corn, peas, melons, pumpkins, several kinds of beans, sweet potatoes, peppers, tomatoes, sugar cane, limes, oranges, and aromatic herbs were grown and sold at a high price to the relatively affluent fishermen. Most of the farmers were Cubans who seasonally employed several Indian families, but at least one Anglo-Saxon was recorded. John Durant, of Savannah, Georgia, farmed on Cape Romano in 1828, as did a mulatto whose name was not recorded (Williams, 1962).

Mullet fishing was such a lucrative enterprise that it induced Captain William Bunce, the customs inspector of Key West, to establish several "ranchos" of his own in Tampa Bay in 1834 (Dodd, 1947). After the onset of the Second Seminole War (1835-1842), Washington officials, particularly Joel Poinsett, Secretary of War, were highly suspicious of the "ranchos" and their Spanish Indians, believing that they were supplying the beleaguered Seminoles. Bunce, along with other prominent citizens, asserted that the Spanish Indians rarely visited the mainland, and spoke Spanish, and that the Seminoles never recognized them as fellow tribesmen. Notwithstanding, the "ranchos" were systematically closed down, and the Spanish Indians were shipped to Oklahoma (Foreman, 1953; Covington, 1954). Bunce's "ranchos" were burned by the U.S. Army as a suspected ". . . hiding place for a party of renegade Spaniards, who had previously and at this time [sic] intercourse with the savage band . . . ." (Phelps, 1847).

In 1841 Lt. John T. McLaughlin, U.S.N., submitted to the Secretary of the Navy a map of southern Florida on which "Choko Lithka" appeared for the first time (Baker, 1975). The field reconnaissance for this map was made during the riverine campaign which decimated the Seminoles through every part of their former refugium, the Everglades. We do not know the particulars of the role of Chokoloskee during the Second Seminole War.

From 1842 to about 1870, few people frequented the Chokoloskee area.

Visitors were the occasional plume and hide hunters, the U.S. Army, and the Seminoles. There were also one or two Yankee families that intermittently farmed on the present site of Everglades City on the Barron River (then known as Potato Creek) in the 1860's (Tebeau, 1955). In 1856 an Army scout reported that on Chokoloskee, Seminoles had harvested about an acre of corn, and that about eight miles to the south of Pavionyhatchee (presently Chatham River), a twenty-acre crop of sweet potatoes had been dug. This field was located on an extensive mound system and was set about with clumps of sugar cane (Tebeau, 1968). This is the same agricultural site which was reconnoitered in 1838 by a similar expedition of the Second Seminole War (Covington, 1958). The last major expedition of the Third Seminole War (1855-1858) was launched into the Big Cypress Swamp from "Chokoliska Key." Chokoloskee appears on the famous 1856 "Ives Military Map" of South Florida. This reliable map has the distinction of being the first vegetation map of southern Florida that is not strictly the product of an active imagination. The name Chokoloskee is from the Muskogean Seminole, "chuko" — house, and "leske" — old. The reason for this name is unknown (Simpson, 1956), but one may speculate that it made reference to an ancient place of habitation.

With the advent of modern settlement of Chokoloskee in the early 1870's, signs of previous occupation were found in the form of several large lime trees (Tebeau, 1957). Latins from Key West formed about half of the population in these early years, with an array of "Anglos" from diverse parts constituting the other half.

The prevalent house type of this period was the "trash house," which had not only a palm thatch roof, but thatch walls as well. Some of these were quite elaborate, having a frame door with hinges. Usually a person had one in which to live and several that served as sheds. Trash houses were notorious fire hazards, so each family would have several sets sequentially (cf. Simpson, 1920). There are no wild palms to be found on the island today, nor were there any when the Smallwood family moved there in 1897. The primary thatching palms were the cabbage palm (*Sabal palmetto*), the saw palmetto (*Serenoa repens*), and the Florida thatch palm (*Thrinax radiata*). There was also heavy pressure on the thrinax for its trunks for use as poles to construct turtle crawls for which they are highly suited (Small, 1925, 1929).

Farming, fishing, hunting, and charcoal-making were the available livelihoods on Chokoloskee. Farming was primarily for the large population (20,000 in 1910) of Key West. Cigar-making was a flourishing industry near the turn of the century, and the southernmost city proved to be a reliable truck market (Cutler, 1923). Winter produce not sold in Key West was shipped via Mallory Line Steamers to New York. Both temperate and tropical crops were produced in great abundance. Tomatoes, cabbage, sugar cane, avocados, potatoes, peppers, cucumbers, eggplants, melons, onions, and bananas (the apple variety was preferred, although plantains or horse bananas tolerate more salt) were the main crops. Guavas, sugar apples, Jamaica apples, both sweet and sour oranges, cauliflowers, and

pumpkins were also sold. It seems strange that certain Cuban mainstays such as boniato, yuca, malanga, annatto, and beans were not produced, even though there were Cubans on Chokoloskee and Key West. Over three-fourths of the island was cleared and planted, with a preference for the high shell mounds for tomatoes, and the lower, heavier areas for sugar cane (Tebeau, 1955). In 1912 the Overseas Railroad was completed from the southeastern coast to Key West, and vegetables which could be produced more cheaply on the mainland were shipped in by rail. With the railroad came the end of Chokoloskee's farming era, although the large seedling avocado grove which spanned the island was still in heavy production until it was ruined by the 1926 hurricane. These "alligator pears" were packed in barrels and shipped north to Fort Myers and Punta Gorda, where as luxury items they brought a nickel each (Tebeau, 1955). All that presently remains of the grove is about 25 erratic seedling trees, from which all the fruit is either consumed or sold locally.

Making charcoal from buttonwood (*Conocarpus erectus*) and cutting these trees for sale were also important occupations of the early pioneers on the island. Buttonwood charcoal, even-burning and smokeless, was produced for the Key West market. It was made as follows: wood was cut into 3- to 4-foot lengths, neatly stacked into great semiconical piles reminiscent of wigwams, 6 to 9 feet high and 15 to 25 feet in diameter; each pile was then covered with sand and grass, leaving a vent in the top and several openings around the bottom to fire the wood and allow the gases to escape. If the wood cutters were not going to watch the fire all night after it was started, they would simply close up the vents. By this method, a cord of wood yielded ten bags of marketable charcoal. While activity ceased about 1930, as late as 1954 one could still see areas on the southwest Florida coast where the practice took place.

Occasional work was also found at the tanbark factory at Shark River, where the red mangrove (*Rhizophora mangle*) yielded an exceptionally high-quality tannic acid. This factory was intermittently operated from 1908 to 1923. The gathering of mature royal palms (*Roystonea elata*), used in development and landscape schemes in such places as Fort Myers and Tampa, also offered temporary work (Small, 1929).

Since the 1930's fishing has remained the chief occupation. Today commercial fishing for mullet and stone crabs is the mainstay of the economy, along with increasing tourism based on sport fishing and charter boats made famous by the Everglades Rod and Gun Club of Everglades City. A causeway was built from Everglades City to Chokoloskee in 1955; this helped the island's depauperate economy, but ended its insular mystique.

#### ETHNOFLORA

As is widely known, man is one of the most effective vectors for plant dispersal. The present project began as an attempt to determine whether the plants now growing on the island could be used to trace occupation by the various people who have lived on Chokoloskee. We soon discovered

that the post-Columbian plants could be recognized and assigned, in part, to a definite period. Those plants native to Florida, on the other hand, presented greater difficulty. Many of the plants included in this list were commonly used by prehistoric and historic inhabitants of Chokoloskee, yet their wide distribution does not necessarily implicate man as a vector. *Bursera simaruba*, for example, may be found in almost any hammock along the coasts south of Tampa; it is distributed by birds which eat the seeds. Conversely, *Sapindus saponaria* has been cited by Craighead (1974) as an indicator of Calusa habitation.

About 42 percent of the plants present, but not now cultivated, on Chokoloskee can be attributed directly to movement by man and to his activities. Many of these plants are exotics whose introduction into Florida can be traced to the 1800's and 1900's. Some plants have been brought in from the north (e.g., *Lepidium*, *Portulaca*), but the majority came from the West Indies and from Old World floras.

There is good documentation for many of the species listed having been used by man in Florida. For others there is no record here, but usage has been recorded elsewhere. In such cases we have usually assumed that similar utilization occurred on Chokoloskee. No attempt has been made to cite original sources for the use of plants or their products; instead, we have used recent, readily available publications for documenting most of them.

#### FLORISTIC COMPOSITION

In southern Florida the high ground usually associated with hammock vegetation has long been favored for habitation. Anthropologists do not believe that the mounds on the Turner River north of Chokoloskee were built by the Calusa solely for the advantage of elevation (Sears, 1956). They were partially the by-product of living and were part of a religious complex. One cannot help believing, however, that these elevated sites were refugia during storms. Particularly convincing evidence for this conclusion was given by Jonathan Dickinson, who weathered a hurricane in an Indian hut atop a shell mound on the Florida east coast in the 1600's (Dickinson, 1945). Accounts of early pioneer life of Chokoloskee (Tebeau, 1955) and other areas with hammocks (Tebeau, 1968; Pierce, 1970) indicate that the European and American settlers sought out hammocks for home-sites. Similarly, the Seminoles used hammocks as temporary and permanent campsites (Tebeau, 1968).

A comparison of plant exploitation on Chokoloskee and in some other areas may be profitably made. Yarnell (1964) has reported that in the Great Lakes region about 20 percent of the vascular plants were used by Indians in pre-Columbian times. We know of no similar studies for other areas, but Griffin (1967) was of the opinion that this 20 percent usage might be taken as a standard of comparison.

The data for Florida hammocks must be interpreted with caution (TABLE 1). Of the hammocks listed, the Boynton Hammock apparently has

TABLE 1. Ethnofloristic composition of certain Florida hammocks.\*

HAMMOCK NAME	ETHNIC GROUPS	USAGE	ETHNOFLORA
Chokoloskee Island	Calusas, Spanish, Seminoles, Americans	Farming, settlement	83%
Lignum Vitae Key	Matacumbes, Spanish, Americans	Settlement, farming	60%
Butts hammock	Americans	Settlement, plant nursery	31%
Matheson hammock	Tequestas, Seminole, Spanish, Americans	Settlement, public park	31%
Indian Key	Matacumbes, Spanish, Americans	Settlement	30%
Boynton hammock	Jaegas, Americans	Campsite	27%

\* Note: these figures are based on the assumption that all species with a record of use were indeed used.

been least disturbed by man (Austin & Weise, 1972). Indian Key was occupied by Matacumbes and American pioneers, but has not been settled recently. Butts and Matheson hammocks (Avery, 1968; Austin, 1974) apparently have been subjected to little intrusion and disturbance. Only on Lignum Vitae Key (Avery, 1969; Popenoe & Avery, 1971) and on Chokoloskee are there records of both long and recent disturbance, and of the introduction of exotic plants. Thus the data seem to indicate that the ethnofloristic composition is not only a function of plant usage, but also of the recency of arrival and of the length of time used. Chokoloskee and Lignum Vitae have both the longest and the most recent histories of intrusion, and they correspondingly have the largest percentage of plants used.

The 20 percent figure for aboriginal utilization may be more realistic than total ethnofloristic composition appears to indicate. For Boynton hammock the 27 percent status indicates only slight European/American influence. Of the 29 assumedly utilized plants, 11 are documented to have been introduced from Old World sources. Thus, aboriginal use may have been only 17 or 18 percent of the present flora. For Chokoloskee, 29 species can be clearly documented as post-Columbian. These account for 21 percent of the plants not presently cultivated. Some of the remaining plants cannot be categorized with confidence, but the number used by the Calusa is probably near 20 percent.

For the ethnoflora of Chokoloskee, we have determined five categories of usage: 1) food and household plants, 50 species; 2) escaped or persistent ornamentals, 20 species; 3) medicinal and poisonous plants, 21 species; 4) homovectant weeds, 28 species; and 5) plants presently cultivated, 90 species. Those species used for more than one purpose have been counted twice. The remaining 40 species (about 17 percent of the flora)

consist of native plants having no apparent association with man. The ethnoflora in its broadest sense includes almost 83 percent of the island flora.

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#### LITERATURE CITED

- ADAMS, C. D. 1972. Flowering plants of Jamaica. 848 pp. Univ. West Indies Press, Mona.
- AUSTIN, D. F. 1974. Botanical survey of the Boca West tracts. [Unpublished report.]
- & J. G. WEISE. 1972. Annotated checklist of the Boynton Beach hammock. *Quart. Jour. Fla. Acad.* 35: 145-154.
- AVERY, G. N. 1968. Checklist of the Matheson hammock, Miami. [Unpublished.]
- . 1969. Checklist of Lignum Vitae Key. [Unpublished.]
- BARRIENTOS, B. 1965. Pedro Menéndez de Avilés, founder of Florida. (English translation by A. KERRIGAN.) *Floridiana Facsimile & Reprint Ser.* [Original ed. printed in 1567.] 161 + 149 pp. Univ. Florida Press, Gainesville.
- BETHKE, G., S. CHANGBUMRUNG, & W. FELDHEIM. 1973. Eine Mikromethode zur Bestimmung der erythrocytaren Transketolase-Aktivität. *Int. Jour. Vitamin Res.* 43: 426-437.
- BUKER, G. E. 1975. Swamp sailors: riverine warfare in the Everglades, 1835-1842. 152 pp. Univ. Florida Press, Gainesville.
- BURKILL, I. H. 1966. A dictionary of the economic products of the Malay Peninsula. 2 vols. 2444 pp. Ministry of Agriculture, Kuala Lumpur, Malaysia.
- COVINGTON, J. W., ed. 1954. A petition from some Latin-American fishermen: 1838. *Tequesta* 14: 61-65.
- . 1958. Exploring the Ten Thousand Islands: 1838. *Ibid.* 18: 7-13.
- . 1959. Trade relations between southwestern Florida and Cuba: 1600-1840. *Fla. Hist. Quart.* 38: 114-128.
- CRAIGHEAD, F. C. 1974. Hammocks of South Florida. *In*: P. J. GLEASON, ed., *Environments of South Florida: present and past.* *Mem. Miami Geol. Soc.* 2: 53-60.
- CUSHING, F. H. 1896. Exploration of ancient Key dwellers' remains on the Gulf Coast of Florida. *Proc. Am. Philos. Soc.* 35: 329-432.
- CUTLER, H. G. 1923. *History of Florida.* Vol. 1. 613 pp. Lewis Publ. Co., Chicago.
- D'ARCY, W. G., & H. ESHBAUGH. 1974. New World peppers (*Capsicum-Solanaceae*) north of Colombia: a resumé. *Baileya* 19: 93-105.



- DICKINSON, J. D. 1945. Jonathan Dickinson's journal or God's protecting providence. (E. W. & C. M. ANDREWS, eds. of 1699 edition.) x + 252 pp. Yale Univ. Press, New Haven.
- DODD, D. 1947. Captain Bunce's Tampa Bay fisheries, 1835-1840. Fla. Hist. Quart. 25: 246-256.
- FONTANEDA, H. D'ESCALENTE. 1944. Memoirs of Do. d'Escalente Fontaneda respecting Florida. (English translation by B. SMITH, 1854.) (Reprinted with revisions, D. O. TRUE, ed.) 77 pp. Hist. Assoc. So. Fla. Misc. Publ. No. 1. Miami.
- FOREMAN, G. 1953. Indian removal. 415 pp. Univ. Oklahoma Press, Norman.
- GILLIS, W. T. 1974. Name changes for seed plants in the Bahama flora. Rhodora 76: 67-138.
- GOGGIN, J. M. 1950. The Indians and history of the Matacumbe region. Tequesta 10: 13-24.
- GREIG, R. A., & R. H. GNAEDINGER. 1971. Occurrence of thiaminase in some common aquatic animals of the United States and Canada. U. S. Natl. Marine Fisheries Ser. Spec. Sci. Rep. Fish. 631: 1-7.
- GRIFFIN, J. B. 1967. Eastern North American archeology: a summary. Science 156: 175-191.
- HAMMOND, E. A. 1973. Spanish fisheries of Charlotte Harbor. Fla. Hist. Quart. 51: 355-380.
- HARDIN, J. W., & J. M. ARENA. 1974. Human poisoning from native and cultivated plants. ed. 2. 194 pp. Duke Univ. Press, Durham.
- HEDRICK, U. P., ed. 1919. Sturtevant's notes on edible plants. N. Y. Dept. Agr. 27th Ann. Rep. 2: 1-686.
- HEISER, C. B. 1969. Nightshades: the paradoxical plants. 200 pp. Freeman, San Francisco.
- HRDLICKA, A. 1922. The anthropology of Florida. Publ. Fla. State Hist. Soc., No. 1. 68 pp.
- IVES, J. C. 1856. Military map of the peninsula of Florida south of Tampa Bay. Scale 1:400,000. J. H. Colton & Co., New York.
- KIMBER, C. T. 1973. Spatial patterning in the dooryard gardens of Puerto Rico. Geogr. Rev. 63: 6-26.
- KLUKAS, R. W. 1969. Exotic terrestrial plants in South Florida with emphasis on the Australian pine (*Casuarina equisetifolia*). 7 pp. National Park Service. [Mimeographed report.]
- LONG, R. W., & O. LAKELA. 1971. A flora of tropical Florida. 962 pp. Univ. Miami Press, Coral Gables.
- MACCAULEY, C. 1884. The Seminoles of Florida. Fifth Ann. Rep. Bur. Ethnol. Smithson. Inst. Pp. 469-531.
- MORTON, J. F. 1968. Wild plants for survival in South Florida. 80 pp. Hurricane House, Miami.
- & B. R. LEDIN. 1952. 400 plants of South Florida. 134 pp. Text House, Coral Gables.
- MUENSCHER, W. C. 1951. Poisonous plants of the United States. 277 pp. Macmillan Co., New York.
- NEILL, W. T. 1955. The identity of Florida's "Spanish Indians." Fla. Anthropol. 8: 43-57.
- . 1956. Preparation of rubber by the Florida Seminole. *Ibid.* 9: 25-28.
- PARSONS, J. J. 1972. Spread of African pasture grasses to the American tropics. Jour. Range Managem. 25: 12-17.

- PHELPS, S. S. 1847. Senate document no. 52. 29th Congress, 2nd Session, Jan. 11, 1847.
- PIERCE, C. W. 1970. Pioneer life in southeast Florida. (D. W. CURL, ed.) 264 pp. Univ. Miami Press, Coral Gables.
- POPENOE, J., & G. N. AVERY. 1971. Survival of ornamental plants on Lignum Vitae Key. Proc. Fla. State Hort. Soc. **84**: 368-370.
- READ, R. W. 1975. The genus *Thrinax* (Palmae: Coryphoideae). Smithson. Contr. Bot. **19**: 1-98.
- ROBERTS, W. 1976. An account of the first discovery and natural history of Florida, with a particular detail of the several expeditions and descents made on that coast. (Introduction and index by R. L. GOLD.) xxix + x + 102 + 15 pp. Floridiana Facsimile & Reprint Ser. [Original ed. printed in 1763.] Univ. Florida Press, Gainesville.
- ROBINSON, T. R. 1942. Henry Perrine, pioneer horticulturist of Florida. Tequesta **1**: 16-24.
- ROMANS, B. 1962. A concise natural history of east and west Florida. 342 pp. Floridiana Facsimile & Reprint Ser. [Original ed. printed in 1775.] Univ. Florida Press, Gainesville.
- SEARS, W. H. 1956. The Turner River site, Collier County, Florida. Fla. Anthropol. **9**: 47-60.
- SIMPSON, C. T. 1920. In lower Florida wilds. 404 pp. G. P. Putnam's Sons, New York.
- SIMPSON, J. C. 1956. Florida place names of Indian derivation. 158 pp. Fla. Geol. Surv. Spec. Publ. No. 1. Tallahassee.
- SMALL, J. K. 1910. Additions to the flora of peninsular Florida. Bull. Torrey Bot. Club **37**: 513-518.
- . 1919. Cape Sable region of Florida. 27 pp. New Era Printing Co., Lancaster, Penn.
- . 1925. Silk-top thatch. Jour. N. Y. Bot. Gard. **26**: 49-54.
- . 1929. From Eden to Sahara. 123 pp. Science Press, Lancaster, Penn.
- . 1933. Manual of the southeastern flora. 1554 pp. Univ. North Carolina Press, Chapel Hill.
- SOLIS DE MERAS, G. 1964. Pedro Menéndez de Avilés. (English translation by J. T. CONNOR.) 286 pp. Floridiana Facsimile & Reprint Ser. [Original ed. printed in 1567.] Univ. Florida Press, Gainesville.
- SPRAGUE, J. T. 1964. The origin, progress and conclusion of the Florida War. 557 pp. Floridiana Facsimile & Reprint Ser. [Original ed. printed in 1848.] Univ. Florida Press, Gainesville.
- STURTEVANT, W. C. 1953. Chakaika and the Spanish Indians. Tequesta **13**: 35-73.
- SWANTON, J. R. 1922. Early history of the Creek Indians and their neighbors. 492 pp. Smithson. Inst. Bur. Am. Ethnol. Bull. 73.
- TEBEAU, C. W. 1955. The story of the Chokoloskee Bay country. 88 pp. Univ. Miami Press, Coral Gables.
- . 1957. Florida's last frontier: the history of Collier County. 260 pp. Univ. Miami Press, Coral Gables.
- . 1968. Man in the Everglades. 192 pp. Univ. Miami Press, Coral Gables.
- WILLEY, G. 1949. Archeology of the Florida Gulf Coast. 559 pp. Smithson. Misc. Coll. Vol. 113, Publ. 3988.

- WILLIAMS, J. L. 1962. The territory of Florida, sketches of the topography, civil and natural history. 304 pp. Floridiana Facsimile & Reprint Ser. [Original ed. printed in 1837.] Univ. Florida Press, Gainesville.
- YARNELL, R. A. 1964. Aboriginal relationships between cultures and plant life in the upper Great Lakes region. vi + 218 pp. Anthropol. Pap. Mus. Anthropol. Univ. Michigan No. 23.

#### APPENDIX. The Ethnoflora.

##### A. PLANTS NOT PRESENTLY IN CULTIVATION ON CHOKOLOSKEE ISLAND.

- Abrus precatorius* L. (Fabaceae). ROSARY PEA. Seeds poisonous (Hardin & Arena, 1974).
- Acacia farnesiana* (L.) Willd. (Fabaceae). WEST INDIAN BLACKTHORN. Cultivated for aromatic flowers and medicinal gum.
- Acacia torulosa* (L.) Willd. (Fabaceae). TWISTED ACACIA. Wood used outside of Florida.
- Albizia lebbek* Benth (Fabaceae). WOMAN'S TONGUE. Cultivated as an ornamental and for medicine (Morton & Ledin, 1952).
- Alternanthera ramosissima* (Martius) Moq. ex Chodat (Amaranthaceae). CHAFFFLOWER. No known use by man.
- Amaranthus viridis* L. (Amaranthaceae). PIGWEED. Homovectant.
- Annona squamosa* L. (Annonaceae). SUGAR APPLE. Cultivated for food.
- Ardisia escallonioides* Schlecht. & Cham. (Myrsinaceae). MARLBERRY. Leaves used by the Mikasukis to season their tobacco (Morton, 1968).
- Argemone mexicana* L. (Papaveraceae). MEXICAN POPPY. Both herbage and seeds are poisonous (Muenscher, 1951), but the plants have been used as a narcotic.
- Arundo donax* L. (Poaceae). GIANT REED. Ornamental.
- Atriplex arenaria* Nutt. (Chenopodiaceae). BEACH-ORACH. No known use by man.
- Avicennia germinans* (L.) L. (Avicenniaceae). BLACK MANGROVE. According to Morton (1968), the seeds are edible when cooked.
- Batis maritima* L. (Bataceae). SALTWORT. Edible raw or cooked (Morton, 1968).
- Bidens pilosa* L. (Asteraceae). SPANISH NEEDLES. Leaves edible, juice medicinal (Morton, 1968); leaves used for tea.
- Blechnum brownei* Juss. (Acanthaceae). Homovectant.
- Borreria ocimoides* (Burman f.) DC. (Rubiaceae). No known use by man.
- Bryophyllum pinnatum* Kurz (Crassulaceae). LIVE-FOREVER. Medicinal (Morton & Ledin, 1952).
- Bumelia celastrina* H.B.K. (Sapotaceae). SAFFRON PLUM. Fruits edible (Morton, 1968).
- Bursera simaruba* (L.) Sarg. (Burseraceae). GUMBO LIMBO. Sap used as bird lime; soft wood used for floats on nets and harpoons; leaves used as tea (Hedrick, 1919) and cattle food (Romans, 1962).
- Caesalpinia bonduc* (L.) R. Br. (Fabaceae). GRAY NICKER. Seeds used as malaria remedy (Morton & Ledin, 1952).
- Capparis cynophallophora* L. (Capparaceae). JAMAICA CAPER TREE. No known use by man.
- Capparis flexuosa* L. (Capparaceae). FLEXIBLE CAPER. No known use by man.
- Capraria biflora* L. (Scrophulariaceae). GOATWEED. Homovectant.

- Capsicum frutescens* L. (Solanaceae). BIRD PEPPER. Fruits preserved in vinegar and used as condiments (T. Smallwood, pers. comm.; D'Arcy & Eshbaugh, 1974).
- Cardiospermum halicacabum* L. (Sapindaceae). HEART SEED. Ornamentals (Long & Lakela, 1971); used as food in Ceylon.
- Carica papaya* L. (Caricaceae). PAPAYA, PAPAWE. Leaves, stems, fruits, and roots eaten; leaves smoked as a remedy for asthma (Morton, 1968).
- Cassia obtusifolia* L. (Fabaceae). SICKLE POD, COFFEE WEED. Homovectant; seeds used as coffee substitute.
- Cenchrus echinatus* L. (Poaceae). SANDBUR. Homovectant.
- Cenchrus incertus* M. A. Curtis (Poaceae). Homovectant.
- Chamaesyce blodgettii* (Engelm. & Hitchc.) Small (Euphorbiaceae). SPURGE. Homovectant.
- Chamaesyce hirta* (L.) Millsp. (Euphorbiaceae). SPURGE. Homovectant.
- Chamaesyce hypericifolia* (L.) Small (Euphorbiaceae). SPURGE. Homovectant.
- Chamaesyce hyssopifolia* (L.) Small (Euphorbiaceae). SPURGE. Homovectant.
- Chamaesyce porterana* Small (Euphorbiaceae). SPURGE. Homovectant.
- Chiococca alba* (L.) A. Hitchc. (Rubiaceae). SNOWBERRY. No known use by man.
- Chrysophyllum oliviforme* L. (Sapotaceae). SATINLEAF. Fruits edible; wood used (Small, 1933); now an ornamental.
- Citrus sinensis* (L.) Osbeck (Rutaceae). SWEET ORANGE (temple variety). Cultivated for food.
- Clerodendrum philippinum* Schauer (Verbenaceae). CHRISTMAS ROSE, JAPANESE ROSE. Ornamental.
- Coccoloba diversifolia* Jacq. (Polygonaceae). PIGEON PLUM. Fruits eaten by Mikasukis (Morton, 1968).
- Commelina diffusa* Burman f. (Commelinaceae). DAYFLOWER. Homovectant.
- Conocarpus erectus* L. (Combretaceae). BUTTONWOOD. Wood used in making charcoal in the early 1900's.
- Crotalaria incana* L. (Fabaceae). RATTLEBOX. Homovectant.
- Crotalaria pallida* Aiton (Fabaceae). Homovectant.
- Cynanchum* sp. (Asclepiadaceae). Not seen in fruit or flower; no known use by man.
- Cyperus ligularis* L. (Cyperaceae). SAWGRASS. No known use by man.
- Dactyloctenium aegyptium* (L.) Richter (Poaceae). EGYPTIAN GRASS. Homovectant.
- Desmodium tortuosum* (Sw.) DC. (Fabaceae). TICK TREFOIL. Introduced as a forage crop; now naturalized.
- Dicliptera assurgens* (L.) Juss. (Acanthaceae). No known use by man.
- Dioscorea bulbifera* L. (Dioscoreaceae). POTATO VINE. Ornamental; used as food.
- Distichlis spicata* (L.) Greene (Poaceae). SALT GRASS. No known use by man.
- Eragrostis ciliaris* (L.) R. Br. (Poaceae). LOVE GRASS. Probably homovectant.
- Erythrina herbacea* L. (Fabaceae). CORAL BEAN. Seeds poisonous.
- Eugenia axillaris* (Sw.) Willd. (Myrtaceae). WHITE STOPPER. Fruits edible; wood used for cabinets (Small, 1933).
- Eugenia foetida* Pers. (Myrtaceae). SPANISH STOPPER. Perhaps used like *E. axillaris*.
- Eupatorium odoratum* L. (Asteraceae). No known use by man.
- Ficus aurea* Nutt. (Moraceae). STRANGLER FIG. Fruits eaten; latex used by Mikasukis to prepare a masticatory rubber (Neill, 1956).

- Fimbristylis caroliniana* (Lam.) Fernald (Cyperaceae). SEDGE. No known use by man.
- Fimbristylis spathacea* Roth (Cyperaceae). SEDGE. Homovectant.
- Forestiera segregata* (Jacq.) Krug & Urban (Oleaceae). FLORIDA PRIVET. No known use by man.
- Galactia macreei* M. A. Curtis (Fabaceae). MILK PEA. No known use by man.
- Gouania lupuloides* (L.) Urban (Rhamnaceae). CHEW STICK. Stems used as toothbrushes; reported to have medicinal properties (Hedrick, 1919).
- Hamelia patens* Jacq. (Rubiaceae). FIREBUSH. Ornamental.
- Heliotropium angiospermum* Murray (Boraginaceae). No known use by man.
- Hylocereus undatus* (Haw.) Britton & Rose (= *Cereus undatus* Haw.) (Cactaceae). NIGHT-BLOOMING CEREUS. Ornamental.
- Hyptis pectinata* (L.) Poiret (Lamiaceae). Homovectant.
- Ipomoea alba* L. (Convolvulaceae). MOONFLOWER. Most often cultivated for flowers, although leaves said to be edible (Morton, 1968).
- Ipomoea carnea* Jacq. (Convolvulaceae). BUSH MORNING GLORY. Ornamental.
- Ipomoea hederifolia* L. (Convolvulaceae). QUAMOCLIT. Cultivated and naturalized.
- Ipomoea indica* (Burman f.) Merrill (Convolvulaceae). MORNING GLORY. No known use in Florida. Cultivated elsewhere.
- Ipomoea macrantha* Roemer & Schultes (Convolvulaceae). BEACH MOONFLOWER. The young stems are used as pig food in Great Inagua, but no known use in Florida.
- Ipomoea triloba* L. (Convolvulaceae). Probably introduced from West Indies in ballast.
- Iresine diffusa* Humb. & Bonpl. ex Willd. (Amaranthaceae). BLOODLEAF. No known use by man.
- Kalanchoë grandiflora* A. Rich. (Crassulaceae). LIFE-PLANT. Ornamental. Naturalized.
- Laguncularia racemosa* (L.) Gaertner f. in Gaertner (Combretaceae). WHITE MANGROVE. Wood occasionally used.
- Lantana involucrata* L. (Verbenaceae). BEACH SAGE. No known use by man.
- Lantana ovatifolia* Britton (Verbenaceae). LANTANA. Fruits may be poisonous (Morton, 1968).
- Lepidium virginicum* L. (Brassicaceae). PEPPER-GRASS. Used by some as a condiment (Morton, 1968). Now a weed on Chokoloskee and perhaps homovectant.
- Ligustrum ovalifolium* Hassk. (= *L. amurense* Carr. ?) (Oleaceae). PRIVET. Persistent from cultivation as an ornamental.
- Lycium carolinianum* Walter (Solanaceae). CHRISTMAS BERRY. No known use by man. Eaten by birds, particularly the mockingbird.
- Mastichodendron foetidissimum* (Jacq.) Cronquist (Sapotaceae). MASTIC. While now absent from the island, there were three plants in the early 1900's (Thelma Smallwood, pers. comm., 1974). Fruits eaten; wood used (MacCauley, 1884).
- Melanthera parviflora* Small (Asteraceae). No known use by man.
- Melia azedarach* L. (Meliaceae). CHINABERRY. Persistent or occasionally naturalized. Ornamental; wood formerly used (Small, 1933).
- Melothria pendula* L. (Cucurbitaceae). CREEPING CUCUMBER. Fruits eaten (Morton, 1968) although strongly laxative (Hardin & Arena, 1974).
- Mentzelia floridana* Nutt. (Loasaceae). POOR-MAN'S-PATCH. No known use by man. Said to be the inspiration for "Velcro."

- Morinda royoc* L. (Rubiaceae). CHEESEWEED. No known use by man.
- Momordica charantia* L. (Cucurbitaceae). BALSAM APPLE. Medicinal and poisonous (Morton, 1968; Hardin & Arena, 1974), but used as food.
- Opuntia stricta* var. *dillenii* (Ker.) L. Benson (Cactaceae). PRICKLY PEAR. Fruits and perhaps pads eaten.
- Oxalis corniculata* L. (Oxalidaceae). LADY'S SORREL. Eaten by some people as greens. The plants are largely homovectant.
- Panicum maximum* Jacq. (Poaceae). GUINEA GRASS. Introduced as pasture plants by the 1780's (Parsons, 1972); now widely naturalized.
- Parietaria floridana* Nutt. (Urticaceae). PELLITORY. Probably homovectant.
- Parthenocissus quinquefolia* (L.) Planchon (Vitaceae). VIRGINIA CREEPER. No known use by man. Fruits said to be poisonous.
- Pectis leptcephala* (Cassini) Urban (Asteraceae). Used in a tea.
- Persea americana* Miller (Lauraceae). AVOCADO. During the early 1900's groves of these trees covered much of the southern end of the island (Tebeau, 1955). The 1910 hurricane damaged the crop, but fruit continued to be produced commercially. In 1926 a hurricane destroyed most of the trees, and market production ceased. There are still scattered trees on the island.
- Petiveria alliacea* L. (Phytolaccaceae). GUINEA-HEN WEED. Homovectant.
- Philoxerus vermicularis* (L.) Beauv. (Amaranthaceae). Morton (1968) said that the leaves may be eaten.
- Phlebodium aureum* (L.) Sm. (Polypodiaceae). CABBAGE PALM FERN. No known use by man.
- Phoenix dactylifera* L. (Arecaceae). DATE PALM. Fruits eaten. Plants persistent from cultivation.
- Phragmites australis* (Cav.) Trin. ex Steudel (Poaceae). REED. Often called *P. communis* Trin., but Adams (1972) and Gillis (1974), among others, have pointed out that this is a later name. Roots eaten raw, and sap used as sugar (Hedrick, 1919).
- Piscidia piscipula* (L.) Sarg. (Fabaceae). FISH POISON TREE. Bark used to poison fish.
- Pisonia aculeata* L. (Nyctaginaceae). PULL-AND-HOLD-BACK. No known use by man.
- Pithecellobium unguis-cati* (L.) Bentham (Fabaceae). CAT'S-CLAW. Arils eaten.
- Plumbago scandens* L. (Plumbaginaceae). WILD PLUMBAGO. No known use, except possibly ornamental.
- Poinsettia cyathophora* (Murray) Klotzsch & Garcke (Euphorbiaceae). WILD POINSETTIA. No known use by man.
- Portulaca oleracea* (L.) Sarg. (Portulacaceae). PURSLANE. The seeds used in a gruel by the Seminoles (Morton, 1968); the herbage eaten. Still cultivated in the Bahamas.
- Psidium guajava* L. (Myrtaceae). GUAVA. Introduced for edible fruits; naturalized.
- Psychotria nervosa* Sw. (Rubiaceae). WILD COFFEE. Seeds may have been used as a coffee substitute if the name is indicative.
- Randia aculeata* L. (Rubiaceae). INDIGO BERRY. Burkill (1966) lists the berries as a dye in the West Indies.
- Rhabdadenia biflora* (Jacq.) Muell.-Arg. (Apocynaceae). RUBBER VINE. No known use by man.
- Rhizophora mangle* L. (Rhizophoraceae). RED MANGROVE. Wood used for cabinets; bark used for dyeing and tanning.

- Rhynchelytrum repens* (Willd.) C. E. Hubbard (Poaceae). NATAL GRASS. Introduced as a pasture grass (Small, 1933); now widely naturalized.
- Rhynchosia parvifolia* DC. (Fabaceae). SNOUT BEAN. No known use by man.
- Rivina humilis* L. (Phytolaccaceae). BLOODBERRY. No known use by man.
- Russelia equisetiformis* Schlecht. & Cham. (Scrophulariaceae). CORAL PLANT. Ornamental and persistent.
- Sansevieria metallica* Gérôme & Labroy (Liliaceae). BOWSTRING HEMP. Cultivated for cordage. Persistent and naturalized.
- Sapindus saponaria* L. (Sapindaceae). SOAP BERRY TREE. Leaves and fruits used as a soap substitute.
- Scoparia dulcis* L. (Scrophulariaceae). SWEET BROOM. Leaves used as a medicinal tea in the Philippines (Hedrick, 1919).
- Sesbania exaltata* (Raf.) Cory (Fabaceae). No known use by man.
- Sida acuta* Burman f. (Malvaceae). INDIAN MALLOW. Burkill (1966) stated that the plant has been used as a medicine and a fiber source in the Old World.
- Solanum americanum* Miller (Solanaceae). NIGHTSHADE. Green fruits poisonous; ripe fruits edible (Heiser, 1969).
- Solidago stricta* Aiton (Asteraceae). GOLDENROD. No known use in Florida.
- Sonchus oleraceus* L. (Asteraceae). Introduced and naturalized. Leaves and roots edible (Hedrick, 1919).
- Sophora tomentosa* L. (Fabaceae). NECKLACE POD. Said to have been used as a hallucinogen by Indians.
- Spartina patens* (Aiton) Muhl. (Poaceae). CORDGRASS. Although sometimes used as forage, these are a normal part of the coastal marsh vegetation.
- Sporobolus domingensis* (Trin.) Kunth (Poaceae). DROPSEED. Perhaps used as a forage.
- Stachytarpheta jamaicensis* (L.) Vahl (Verbenaceae). BLUE PORTERWEED. Used as a medicine in the Old World (Burkill, 1966) and to brew a porter in the West Indies.
- Stylosanthes biflora* (L.) B.S.P. (Fabaceae). PENCIL-FLOWER. No known use by man.
- Suaeda linearis* (Ell.) Moq. (Chenopodiaceae). SEA BLITE. Leaves edible.
- Tecoma stans* (L.) Kunth (Bignoniaceae). YELLOW ELDER. Medicinal, but perhaps only ornamental and naturalized on Chokoloskee.
- Thespesia populnea* (L.) Solander ex Correa (Malvaceae). SEASIDE MAHOE. Small (1910) recorded the first appearance of this tree on the mainland from a collection in Dade County in 1905, although it had been in the Keys for years. No known use by man.
- Tillandsia balbisiana* Schultes (Bromeliaceae). WILD PINE. Cultivated for ornament, and persistent.
- Tillandsia fasciculata* Sw. (Bromeliaceae). CARDINAL AIR PLANT. Only one plant has been found on the island. No known use.
- Tillandsia flexuosa* Sw. (Bromeliaceae). BANDED WILD PINE. Only one plant has been found. No known use.
- Tillandsia setacea* Sw. (Bromeliaceae). NEEDLE-LEAF WILD PINE. Persistent from cultivation at an old homesite.
- Toxicodendron radicans* (L.) Kuntze (Anacardiaceae). POISON IVY. Used as a medicine by some groups of people.
- Trichostigma octandrum* (L.) H. Walter (Phytolaccaceae). Small (1910) recorded this plant in Florida only on Chokoloskee. George N. Avery (pers. comm., 1972) has found it recently; we have not seen the plant.
- Tridax procumbens* L. (Asteraceae). Homovectant.

*Verbesina virginica* L. (Asteraceae). FROSTWEED. No known use by man.  
*Vigna luteola* (Jacq.) Benth (Fabaceae). COW PEA. No known use in Florida.  
*Waltheria indica* L. (Sterculiaceae). WALTHERIA. Small (1933) said that the plants were "reputed to have medicinal properties." Homovectant.  
*Zanthoxylum fagara* (L.) Sarg. (Rutaceae). WILD LIME. No known use of this species, although others are known as "toothache tree" because of numbing properties.

B. PLANTS PRESENTLY CULTIVATED ON CHOKOLOSKEE ISLAND.

*Acalypha wilkesiana* Muell.-Arg. (Euphorbiaceae). COPPERLEAF. Ornamental.  
*Agave americana* L. (Agavaceae). CENTURY PLANT. Ornamental. Two varieties occur on the island: var. *marginata* Trel. and var. *variegata* Hort.  
*Allium cepa* L. (Amaryllidaceae). ONION. Food.  
*Aloë barbadensis* Miller (= *A. vera* L.) (Liliaceae). BARBADOS ALOE. Ornamental and medicinal.  
*Anthurium* sp. (Araceae). Ornamental.  
*Araucaria columnaris* (Forster) Hooker (Araucariaceae). NORFOLK ISLAND PINE. Ornamental. Possibly *A. heterophylla* (Salisb.) Franco also; not seen.  
*Arecastrum romanzoffianum* Becc. (Arecaceae). QUEEN'S PALM. Ornamental.  
*Asparagus densiflorus* (Kunth) Jessop (Liliaceae). ASPARAGUS FERN. Ornamental.  
*Asparagus setaceus* (Kunth) Jessop (Liliaceae). ASPARAGUS FERN. Ornamental.  
*Bauhinia variegata* L. (Fabaceae). ORCHID TREE. Ornamental.  
*Bombax malabaricum* DC. (Bombacaceae). RED SILK-COTTON TREE. Ornamental.  
*Bougainvillea glabra* Choisy (Nyctaginaceae). BOUGAINVILLEA. Ornamental.  
*Brassaia actinophylla* F. Mueller (Araliaceae). UMBRELLA TREE. Ornamental.  
*Brassica oleracea* L. (Brassicaceae). CABBAGE. Food.  
*Callistemon lanceolatus* Sw. (Myrtaceae). BOTTLE-BRUSH. Ornamental.  
*Cananga odorata* Hooker f. & Thomson (Annonaceae). YLANG-YLANG. Ornamental; aromatic flowers.  
*Caryota mitis* Lour. (Arecaceae). FISHTAIL PALM. Ornamental.  
*Casuarina equisetifolia* L. (Casuarinaceae). AUSTRALIAN PINE. Ornamental; wind-break.  
*Casuarina glauca* Sieb. (Casuarinaceae). BEEFWOOD. Ornamental.  
*Catharanthus roseus* (L.) Don (Apocynaceae). PERIWINKLE. Ornamental. Widely naturalized in Florida.  
*Cereus peruvianus* Haw. (Cactaceae). HEDGE CACTUS. Ornamental.  
*Chrysalidocarpus lutescens* Wendl. (Arecaceae). CANE PALM. Ornamental.  
*Citrus aurantifolia* Swingle (Rutaceae). LIME, KEY LIME. As an ornamental and for food.  
*Citrus aurantium* L. (Rutaceae). SOUR ORANGE. Ornamental.  
*Citrus paradisi* Macf. (Rutaceae). GRAPEFRUIT. For food and as an ornamental.  
*Coccoloba uvifera* L. (Polygonaceae). SEA GRAPE. Ornamental.  
*Cocos nucifera* L. (Arecaceae). COCONUT. As an ornamental; rarely for food. Lethal yellowing, a mycoplasma-induced, lethal infection has not yet hit the island, although it is in Everglades City.  
*Codiaeum variegatum* (L.) Blume (Euphorbiaceae). CROTON. Ornamental.  
*Cordia sebestena* L. (Boraginaceae). GEIGER TREE. Ornamental.  
*Cordyline australis* (Forster) Hooker f. (Liliaceae). DRACENA. Ornamental.  
*Coleus blumei* Benth (Lamiaceae). COLEUS. Ornamental.  
*Crinum sanderianum* Baker (Amaryllidaceae). MILK AND WINE LILY. Ornamental.



- Cryptostegia madagascariensis* Bojer (Asclepiadaceae). PURPLE ALAMANDA. Ornamental.
- Cucurbita moschata* Duchesne (Cucurbitaceae). SQUASH. Food.
- Cyperus alternifolius* L. (Cyperaceae). UMBRELLA PLANT. Ornamental.
- Delonix regia* (Bojer) Raf. (Fabaceae). POINCIANA. Ornamental.
- Dizygotheca elegantissima* Vig. & Guill. in Lecomte (Araliaceae). FALSE ARALIA. Ornamental.
- Epiphyllum* sp. (Cactaceae). NIGHT-BLOOMING CACTUS. Ornamental.
- Eriobotrya japonica* (Thunb.) Lindl. (Rosaceae). LOQUAT. As an ornamental, and for shade and edible fruits.
- Eucalyptus grandis* Hill ex Maiden (Myrtaceae). BROWN GUM. Ornamental.
- Eugenia uniflora* L. (Myrtaceae). SURINAM CHERRY. Ornamental.
- Euphorbia lactea* Haw. (Euphorbiaceae). CANDELABRA CACTUS. Ornamental.
- Euphorbia milii* Moulins (Euphorbiaceae). CROWN-OF-THORNS. Ornamental.
- Euphorbia tirucalli* L. (Euphorbiaceae). PENCIL TREE. Ornamental.
- Ixora coccinea* L. (Rubiaceae). IXORA. Ornamental.
- Juniperus conferta* Parl. (Cupressaceae). SHORE JUNIPER. Ornamental.
- Lactuca sativa* L. (Asteraceae). LETTUCE. Food.
- Lycopersicon esculentum* (L.) Miller<sup>1</sup> (Solanaceae). TOMATO. Food.
- Mangifera indica* L. (Anacardiaceae). MANGO. For food and as an ornamental.
- Manilkara zapota* (L.) Royen (Sapotaceae). SAPODILLA. As an ornamental and for food.
- Melicoccus bijugatus* Jacq. (Sapindaceae). SPANISH LIME. Ms. Smallwood told us that two trees remained on the island until they were cut in 1974. Ornamental.
- Monstera deliciosa* Liebm. (Araceae). CERIMAN. Ornamental; fruit is sometimes eaten.
- Musa paradisiaca* var. *sapientum* Kuntze (Musaceae). BANANA. As an ornamental, rarely for food.
- Mutingia calabura* L. (Elaeocarpaceae). STRAWBERRY TREE. As an ornamental or as a fruit tree.
- Nerium oleander* L. (Apocynaceae). OLEANDER. Ornamental.
- Pedilanthus tithymaloides* Poit. (Euphorbiaceae). SLIPPER-FLOWER. Ornamental.
- Pelargonium hortorum* Bailey (Geraniaceae). GERANIUM. Ornamental.
- Phaseolus vulgaris* L. (Fabaceae). KIDNEY BEAN. Food.
- Phoenix roebellinii* O'Brien (Arecaceae). DATE PALM. Ornamental.
- Phoenix rupicola* T. Anderson (Arecaceae). PALM. A few of these trees were planted near the Smallwood Store by Mr. C. S. Smallwood.
- Platynerium bifurcatum* (Cav.) C. Chr. (Polypodiaceae). STAGHORN FERN. Ornamental.
- Pleomele marginata* (Lam.) N. E. Br. (Agavaceae). DRACENA. Ornamental.
- Plumbago capensis* Thunb. (Plumbaginaceae). LEADWORT. Ornamental.
- Plumeria rubra* L. (Apocynaceae). FRANGIPANI. Ornamental.
- Poinsettia pulcherrima* (Willd.) R. Graham (Euphorbiaceae). POINSETTIA. Ornamental.
- Polyscias filicifolia* (Moore) Bailey (Araliaceae). ARALIA. Ornamental.
- Polyscias guilfoylei* (Bull.) Bailey (Araliaceae). ARALIA. Ornamental.

<sup>1</sup> According to the Standing Committee on Stabilization of Specific Names (Taxon 24(1): 174. 1975), the correct name for the tomato is *Lycopersicon lycopersicum* (L.) Karsten ex Farwell. However, Terrell (Taxon 26(1): 129-131. 1977) comes to a different conclusion and accepts the name used by the authors of the present paper. *Ed.*

- Pouteria campechiana* (H.B.K.) Baehni (Sapotaceae). CANISTEL. For fruit and as an ornamental.
- Prunus persica* (L.) Batsch (Rosaceae). PEACH. Fruit tree.
- Punica granatum* L. (Punicaceae). POMEGRANATE. For fruit and as an ornamental.
- Rhaphidophora aurea* (Linden ex André) Birdsey (Araceae). POTHOS. Ornamental.
- Ricinus communis* L. (Euphorbiaceae). CASTOR BEAN. Ornamental.
- Rosa* sp. (Rosaceae). ROSE. Ornamental.
- Roystonea regia* (H.B.K.) Cook (Arecaceae). ROYAL PALM. Ornamental.
- Sabal palmetto* (Walter) Lodd. ex Schultes (Arecaceae). CABBAGE PALM. When the Smallwood family moved to the island in 1897, there were no palms of any kind on Chokoloskee. The largest *Sabal* on the island now is beside the Smallwood Store; C. S. Smallwood planted the tree in 1919, and it now has about ten feet of trunk. Other small palms were planted near the store by Thelma Smallwood. The palms they planted were from the mainland, where they remain abundant. Ornamental.
- Sanchezia speciosa* Leonard (Acanthaceae). SANCHEZIA. Ornamental.
- Schinus terebinthifolius* Raddi (Anacardiaceae). PEPPER TREE. Ornamental. Widely naturalized in southern Florida.
- Setcreasea purpurea* Boom (Commelinaceae). PURPLE QUEEN. Ornamental.
- Spathodea campanulata* Beauv. (Bignoniaceae). AFRICAN TULIP TREE. Ornamental.
- Swietenia mahagoni* Jacq. (Meliaceae). MAHOGANY. Ornamental.
- Syzygium cuminii* (L.) Skeels (Myrtaceae). JAMBOLAN PLUM. As an ornamental and for fruit.
- Tamarindus indicus* L. (Fabaceae). TAMARIND. As an ornamental and for fruit.
- Tecomaria capensis* (Thunb.) Spach (Bignoniaceae). CAPE HONEYSUCKLE. Ornamental.
- Terminalia catappa* L. (Combretaceae). TROPICAL ALMOND. Ornamental.
- Thrinax radiata* Lodd. ex J. A. & J. H. Schultes (Arecaceae). THATCH PALM. Said to be native to Chokoloskee, but no longer found in the wild (Read, 1975). Ornamental.
- Thuja orientalis* L. (Cupressaceae). ARBOR VITAE. Ornamental.
- Tillandsia usneoides* L. (Bromeliaceae). SPANISH MOSS. Ornamental.
- Veitchia merrillii* (Becc.) Moore (Arecaceae). CHRISTMAS PALM. Ornamental.
- Yucca aloifolia* L. (Liliaceae). SPANISH DAGGER. Ornamental.
- Zea mays* L. (Poaceae). CORN. Food.

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